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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/365,517	08/02/1999	HAMID K. AGHAJAN	M-7793-US	1904

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APPLIED MATERIALS, INC.
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SANTA CLARA, CA 95050

EXAMINER

CHAWAN, SHEELA C

ART UNIT PAPER NUMBER

2625

DATE MAILED: 11/06/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/365,517

Applicant(s)

Hamid K. Aghajan

Examiner

Sheela Chawan

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Aug 13, 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Response to Amendment

1. Applicant's arguments filed on August 13, 2002 (paper # 6A) have been fully considered but are deemed to be moot in view of the new grounds of rejection.

2. Based on Applicant's persuasive arguments, the drawing objection has been withdrawn .

The drawings are objected to because of draftsman's remarks (see attached PTO-948 paper number 4) . A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground

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provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1, 5 and 6 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1, of Application No: 09/365,583. Although the conflicting claims are not identical , they are not patentably distinct from each other because of the following :

As to claim 1, in an image processing system, a method for relating a first image to a second image comprising :

(a) aligning the first image with a second image , Application No: 09/365,583 teaches see claim 1, step (b).

(b) plotting a gray level of a pixel from the first image against a gray level of a corresponding pixel from the second image for all aligned pixel locations , Application No: 09/365,583 teaches see claim 1, step (c) .

As to claim 5, a computer readable medium storing a program for carrying out the method of claim 1. Application No: 09/365,583 teaches see claim 7 .

As to claim 6, a computer readable medium comprising : Application No: 09/365,583 teaches see claim 8 .

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Claim Rejections - 35 U.S.C. § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

6. Claims 1-7, are rejected under 35 U.S.C. 102(e) as being anticipated by Alumot et al., (US. 6,178,257 B1) .

As per claim 1, Alumot teaches an image processing system, a method for relating a first image to a second image comprising the acts of:

(a) aligning (note, comparing the first image to the second image to see any misalignment between the two flows of data to provide a difference in data of a suspected pixel in the stream data , column 9, lines 25 - 42) the first image (note, first image is considered to be the inspected pattern and generating a first flow of N streams of data representing the pixel of different images of the inspected pattern column 9, lines 25 - 28) with a second image (note, second image is considered to be reference image and generating a second flow of N streams of data representing the pixels of different images of the reference pattern , column 9, lines 28- 42) ; and

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b) plotting the gray level of a pixel (column 23, lines 28 - 45), from the first image (inspected image , fig 30 item 5) against the gray level of a corresponding pixel from the second image (reference image , fig 30, item 5) for all aligned pixel locations (column 4, lines 4- 18, lines 59 - 65, column 23, lines 28- 45, fig 30) .

As per claim 2, Alumot teaches the method of claim 1 further comprising plotting a threshold window on a plot created in step (b) (column 15, lines 31- 33) .

As per claim 3, Alumot teaches the method of claim 1 wherein a plot created in step (b) is stored in a memory array variable (column 17, lines 50- 60) (b).

As per claim 4, Alumot teaches the method of claim 1, wherein a plot created in step (b) is displayed on a video monitor (fig 1, item 16 and 17) .

As per claim 5, Alumot teaches a computer-readable medium storing a program for carrying out the method of claim 1 (column 13 , lines 23- 32) .

As per claim 6, Alumot teaches a computer-readable medium comprising:
a plurality of memory locations storing data representing a first image and an associated second image (column 3, lines 38- 52) , said first and second images each having a plurality of pixels with each pixel being defined by a location coordinate (column 10, lines 34 - 46) and a gray level (column 23, lines 28-37) ; and,

As per claim 7, Alumot teaches a defect inspection system comprising:

(a) an image acquisition unit (fig 2 , item 12) being operable to acquire a first image and an associated second image (column 3, lines 38- 52 , column 9, lines 26- 34) the first and

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second images each having a plurality of pixels with each pixel being defined by a location coordinate (column 10, lines 34- 46) and a gray level (column 23, lines 28-37) ;

(b) a plurality of memory locations storing data representing the first image and the second image (column 3, lines 38- 52) ; and

(c) a processor being operable to plot the gray levels of pixels from the first image against the gray levels of corresponding pixels from the second image (column 23, lines 28-37)

Other prior art cited

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lee et al., (US.5,808,735) discloses method for characterizing defects on semiconductor wafers .

Sano et al., (US.5,638,465) discloses image inspection /recognition method , method of generating reference data for use therein, and apparatuses therefor .

Webb et al., (US.6,285,397) discloses alignment of cathode ray tube video displays using a host computer processor .

Worster et al., (US. 6,288,782 B1) discloses method for characterizing defects on semiconductor wafers .

Tanaka et al., (US.5,568,563) discloses method and apparatus of pattern recognition .

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Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela Chawan whose telephone number is (703) 305-4876.

If attempts to reach the examiner on Monday through Thursday from 8:30 a.m. to 5: 00 p.m. by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta , can be reached at (703) 308- 5246.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks


Washington, D.C. 20231

or faxed to:

(703) 872 - 9314, (for formal communications intended for entry)

Or: Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703)305- 4750.

SC
Sheela Chawan
Patent Examiner
Group Art Unit 2625
October 22, 2002


Bhavesh Mehta
Primary Examiner